

# **Region 11**

## **West Side of Cook Inlet North of Redoubt Bay**

### **Summary of Resources and Uses in the Region**

#### **Background**

This region includes state lands on the west side of Cook Inlet between Harriet Point and the Beluga River. Uplands are bounded on the east by Cook Inlet and on the west by Lake Clark National Park and Wilderness. Uplands also include state land on Kalgin Island. Tidelands in this region include those on the western side of the inlet extending from the south end of Kalgin Island north to the western boundary of the Susitna Flats State Game Refuge. Population centers in this region include the village of Tyonek (population 200) and facilities for workers at Beluga, Shirleyville, Trading Bay and Drift River. Lodges, recreational cabins, set net cabins, and residences are widely scattered throughout the remainder of the region.

#### **State lands**

There are three large blocks of state land in this region. The first block is in the Trading Bay State Game Refuge and Redoubt Bay Critical Habitat Area. These wildlife areas are contiguous with general state lands to the south and west of these wildlife areas. The second block (approximately 500,000 acres) is located in and adjacent to the Tordrillo, Neacola, and Chigmit mountains and includes the area around Chakachamna Lake and Mount Spur. The third is in the upper Chuitna River drainage and includes a large coal deposit. There are also smaller state holdings along the coast and on Kalgin Island. Kalgin Island is mostly state-owned. The central portion of the island is part of the Kalgin Island Critical Habitat Area.

#### **Acreage**

The plan applies to 890,485 acres of state-owned and –selected uplands and 617,023 acres of state-owned tidelands in this region. The plan also applies to state-owned shorelands (acreages of shorelands have not been calculated).

### **Physical features**

The interior part of this region is characterized by steep mountains that connect the Alaska and Aleutian ranges. The mountains in state ownership are covered by glaciers and contain an active volcano (Mount Spurr). Mount Redoubt is located in Lake Clark National Park and Preserve just west of the state lands by Harriet Point. Most of the state land on the coast are wetlands and floodplains that are within the Trading Bay State Game Refuge and Redoubt Bay Critical Habitat Area. Over the entire region, the vegetation is composed of alder, willow, and spruce below 3,000 feet, and alpine vegetation above this elevation.

### **Access**

Access to this region is primarily by boat or plane. Vehicular access within the region is afforded by roads and trails associated with oil and gas activities, pipelines, powerlines, and logging roads. The Trading Bay and the Pan Am roads provide access from the Beluga and Tyonek areas into the interior. There are major airstrips at Tyonek, Beluga, Shirleyville, Trading Bay and Drift River. In addition, there are several primitive landing areas throughout the region on beaches, gravel bars, and in alpine areas. Floatplanes land on the larger lakes. Because of high snowfall, snowmachines are used well into the late spring. Many of the larger streams are navigable by powerboat. Rivers in the region are also used by rafters and kayakers.

### **Resources and uses**

This region contains three distinct areas.

1) The first area includes the uplands in the Chuitna, Beluga, and Chakachatna river drainages that are inaccessible, except for the few blocks that are connected to the coast by the roads that originate near Tyonek. These road-accessible areas contain some timber values, but spruce mortality from bark beetles has significantly reduced the forest's commercial value. The western portion of this area is extremely mountainous and includes Mt. Torbert, Mt. Spurr, and extensive glaciers. There is geothermal potential around Mt. Spurr, and geothermal leasing has occurred there in the past. There is potential catastrophic flooding downstream from Mt. Spurr. As in the past, when the mountain erupts the glaciers melt. The lands around Chakachamna Lake support widely dispersed recreation, which requires extensive bushwhacking and hiking on glaciers or glacial moraines. The area has some potential to support a hut-to-hut loop or point-to-point trail system.

Coal leases have been issued on about 46,000 acres of this area. The two major leaseholders are the Diamond Shamrock/Chuitna Coal Joint Venture and the Beluga Coal Company. Tidewater Services Corporation, a service company working in conjunction with Diamond Shamrock/Chuitna Coal Joint Venture, holds an option to lease 1,440 acres of borough-owned land in the area known as the Ladd Landing. The purpose of this lease is to ensure that the lands would be available for the development of a port to serve large-scale coal mining or other resource development in the area. Granite Point is another possible site for these port facilities. Potential for development of commercial quantities of other minerals in the region is low to moderate.

The wildlife resources in the area include coho, sockeye, and chum salmon, Dolly Varden, Arctic char and rainbow trout. The area also includes important habitat for moose, bald eagles, caribou, Dall sheep, grizzly bears, and black bears. The wetlands near the coast provide duck, geese, and trumpeter swan habitat. Some of the rivers support river otter populations. Hunting, sportfishing, and subsistence uses occur within the area.

2) The second area contains the lands south of Trading Bay State Game Refuge, including Kalgin Island. There are some timber values in this area, including the Drift River Block and Kalgin Island. Heavy mortality of spruce trees by bark beetles has occurred within these areas. This area receives limited recreational use because of remote location and difficult access. Nonetheless, hunting and fishing occur in the area and there are some lodges and guide camps.

This area supports extensive wetlands that provide concentrated waterfowl habitat for nesting, molting, and spring and fall migratory staging. Waterfowl are hunted along the shorelines and rivers here, and the area supports fall trumpeter swan concentrations. There are also extensive mudflats along the shoreline that are used by harbor seals. The area also includes a healthy brown bear and black bear population. Salmon, Dolly Varden and rainbow trout run in many of the rivers, and the area receives sportfishing use. There are harbor seal haulouts at West Forelands and Harriet Point.

3) The tidelands and coastal lands in this region support many industrial activities. Ladd Landing, located near Tyonek, is a barge landing site and a log transfer facility. This facility provides an important off-loading point for equipment and supplies for the Chugach Electric Association power plant, natural gas fields, coal and mineral exploration activities and the domestic needs of families living in this area. This pier has been considered as a possible coal or timber loading facility if these resources are ever developed.

There are a number of oil rigs located in the tidelands in this area. The Granite Point pump station, consisting of six oil storage tanks and equipment used to separate water from the oil, receives oil from Cook Inlet oil rigs from underwater pipelines, where it is treated and stored before being transferred through on-shore pipelines to the Drift River terminal. The landing area is also used to offload equipment and supplies for exploration and construction in the area. There are a number of airstrips along the coast associated with the Village of Tyonek and oil production.

Many Shore Fishery Leases are located in this area especially north of Nikolai Creek and on Kalgin Island. Subsistence hunting and fishing are important to the Native inhabitants in Tyonek. The area also attracts a variety of hunters, particularly for waterfowl, and fishers for salmon, Dolly Varden, Arctic char, and rainbow trout.

The area has supported commercial timber harvest on state and Native corporation lands in the past. State timber on Kalgin Island has been sold but was not harvested. The DNR Division of Forestry has not proposed additional sales in this region in its current (2001-2005) five-year schedule.

The west side of Cook Inlet ranks second only to the Copper River Delta in terms of the diversity and total number of shorebirds supported during spring migration throughout southeastern and Southcentral Alaska. Each spring over 750,000 shorebirds use the unvegetated intertidal flats of western Cook Inlet, particularly in this region. Over 80 percent of these shorebirds utilize southern Redoubt Bay between Katchin Creek and Big River. Other areas that support over 100,000 nesting birds includes northern Tuxedni Bay from Crescent River to Rusty Mountain, and Trading Bay, especially around the mouth of the McArthur River. Cook Inlet is the wintering area for about one quarter of all rock sandpipers – a population whose breeding is restricted entirely to the islands in the Bering Sea. The wintering population reside mostly outside the planning area between the mouth of the Beluga River and the lower Susitna River but several times each winter the population moves south to northern Trading Bay between Middle River and Shirleyville.

### **Management constraints and considerations**

Much of the land in the center of the region is within the legislatively designated Trading Bay State Game Refuge and Redoubt Bay Critical Habitat Area. The Susitna Flats State Game Refuge and Kalgin Island Critical Habitat Area are also in the region. Management plans for these refuges provide specific direction for ADFG's management. Region 11 is bounded to the west by Lake Clark National Park and Wilderness that has a General Management Plan.

The 1985 Susitna Area Plan addressed part of this region in the Chakachatna, Beluga, and Chuitna River drainages. Because the northwest side of Cook Inlet has so many values, this plan designates the area public recreation, wildlife habitat, oil and gas, coal, settlement, and forestry.

This area contains the Chuitna Area Meriting Special Attention (AMSA). The AMSA includes the coastal areas to the 1000-foot contour from the Matanuska-Susitna Borough boundary to the Trading Bay State Game Refuge. The intent of the designation is to recognize, encourage and plan for major resource development opportunities while protecting traditional lifestyles and natural environment. The borough has also developed the *Viapan Lake Management Plan* (1998) for lands along the coast in the northern part of this region.

### **Management Summary**

Near developed areas, most of the state-owned parcels have been designated to recognize a variety of uses, including development related to coal, oil and gas, forestry, seafood processing and Shore Fishery Leases. For the more remote parcels located adjacent to the Lake Clark National Park and Wilderness, the Trading Bay State Game Refuge, and the Redoubt Bay Critical Habitat Area, units have been designated Fish and Wildlife Habitat, Public Recreation and Tourism-Dispersed Use, or General Use, depending on their values. There are two units around Bear and Wadell Lakes and Cannery Creek that include past state land sales that are designated Settlement. If they are sold, the state will retain some land to ensure public access to the lakes, which provide the only access to other state lands in the area by floatplanes. There are a few state-selected parcels in this area that are higher elevation, have low resource and use

values and are recommended for low priority conveyance due to difficult access and low values. This plan will supersede the Susitna Area Plan that applies to state lands in the northern part of the region.

## **Guidelines**

The Trading Bay State Game Refuge, Redoubt Bay Critical Habitat Area, Kalgin Island Critical Habitat Area, and Susitna Flats State Game Refuge are located within this region. See the *DNR Management Authority in Critical Habitat Areas, Game Refuges, and Sanctuaries* guideline in the *Fish and Game Habitat and Harvest* section in Chapter 2 for state management intent in these areas.

## **Management Intent for Multiple Units in Region 11**

Management intent for most units is included in the resource allocation summary table included at the end of this region. However, management intent that applies to multiple units within this region is included below.

### **Transmission platforms**

On the west side of Cook Inlet in Regions 11 and 12, the Alaska Volcano Observatory (AVO) will have the opportunity to review and comment on applications for new transmission platforms. This additional notice is intended to avoid frequency interference with the AVO's extensive series of radio transmitters and receivers in this area.

### **Navigable waterbodies**

See the *Management Intent for Navigable Rivers* Section at the end of this chapter for management intent for the beds of the navigable river segments in Unit 600 that are located within this region but not annotated on the region maps. Also see this section for management intent for shorelands and waters within navigable waterbodies within Federal Conservation System Units (including Lake Clark National Park and Wilderness) that are within Unit 602 but are not annotated on the region maps.

### **Other Plans**

The DNR Susitna Area Plan overlaps with the Kenai Area Plan in this region, and while the recommendations from this plan were used as a starting point, KAP supersedes this plan and its classifications, policies, and guidelines. Mineral orders associated with the Susitna Area Plan that are now within the KAP area are still in effect. The ADFG management plans for Redoubt Bay Critical Habitat Area, Trading Bay State Game Refuge, and Susitna Flats State Game Refuge also helped in developing KAP policies for this region. See the *DNR Management Authority in Critical Habitat Areas, Game Refuges, and Sanctuaries* guideline in the *Fish and Game Habitat and Harvest* section in Chapter 2 for state management intent in these areas.

## **Specific Management Intent for Units in Region 11**

Management intent for most units is included in the resource allocation summary table included at the end of this region. However, management intent for some units was too long to be included in the table so is included below.

### **Unit 169 Kustatan Ridge**

This unit may be conveyed to a municipality. The wetlands and forested edges along the base of the ridge must remain forested (dead trees or alive) for bear travel corridors and escape cover from surrounding unforested wetlands in the Trading Bay State Game Refuge. Retain these buffers in state ownership or make them subject to a conservation easement or similar method for purposes of maintaining bear habitat. Consult with ADFG about design of buffers if this unit is conveyed to a municipality. Consider adding buffers to the State Game Refuge if the buffers are retained in state ownership.

This unit was not, however, designated Settlement since it is too remote and too costly for the state to offer for sale under its current statewide sale program. Most of this unit lacks existing road or floatplane access. Rather, units on the west side that have had sales in the past, floatplane access, and existing cabins, such as unit 158 (Upper Cannery Creek) and Unit 121B (Bear and Wadell lakes), are designated Settlement.

**Table 3.12 Resource Allocation Summary Table**

For a key to the two-letter designation abbreviations in this table, see the beginning of this chapter

<b>Region 11: West Side of Cook Inlet--North of Redoubt Bay</b>						
<b>Unit Number</b>	<b>Unit Name</b>	<b>Designations</b>	<b>Acres</b>	<b>Map Number</b>	<b>Resource or use for which unit is designated / Management intent</b>	<b>Other resources and uses</b>
120A	Cobbs Cove, north end of Packers Creek Lake	gu	792	11H	No identified resource values that warrant a primary designation other than General Use. / Timber salvage is allowed within this unit.	Anadromous fish stream flowing through unit. Mature spruce within this unit are all beetle killed.
120B	Packers Creek Lake	rd	1,056	11H	Used for fly-in fishing and camping. Also used by lodges and permitted camps on the island. / Unit may be conveyable to a municipality. Consistent with the Chapter 2 "Shorelines, Stream Corridor, and Wetlands" section, land within 200 feet of anadromous waterbodies will be retained in public ownership (or the conveyance will be subject to this buffer).	Packers Creek Lake (the lake itself is in Unit 600) and its tributary creeks support anadromous and freshwater fish. The ADFG weir at the south end of the lake is managed by the Cook Inlet Aquaculture Association. The lake is fertilized to improve the food source for the rearing sockeye fingerlings. Bird species are numerous and densities are high. Moose and foxes were stocked on Kalgin Island. Mature spruce within this unit are all beetle killed. Cultural sites present.
120C	North half of Kalgin Island	gu	7,732	11H	No identified resource values that warrant a primary designation other than General Use.	Northeastern tip of Kalgin Island is still state topfiled because of a USCG light withdrawal. Shore Fishery Leases along the west and north shore of the island. Cultural sites present. Mature spruce within this unit are all beetle killed.
120D	Kalgin Island Critical Habitat Area	ha	3,400	11H	/ See the "DNR Management Authority in Critical Habitat Areas, Game Refuges, and Sanctuaries" guideline in the "Fish and Game Habitat and Harvest" section in Chapter 2 for management intent.	Mature spruce within this unit are all beetle killed.

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Unit Number	Unit Name	Designations	Acres	Map Number	Resource or use for which unit is designated / Management intent	Other resources and uses
120E	South end of Packers Creek Lake and lake outlet	ha	11.5	11H	This is an ILMA to ADFG (ADL 60217). Site is currently managed by the Cook Inlet Aquaculture Association. Packers Creek Lake and its tributary creeks support anadromous fish including rainbow trout, Dolly Varden, coho and sockeye salmon. This unit includes the lake outlet and the southern end of the lake. / Manage to provide public access to the outlet of the lake, fisheries management facilities, and fish habitat values.	Cultural sites present.
121A	Lower Harriet and Katchin creeks	gu	13,679	11H	No identified resource values that warrant a primary designation other than General Use. / Consult with National Marine Fisheries Service (NMFS) before authorizing development along the coast in this unit because of harbor seal concentrations on adjacent tidelands. Consult with the Alaska Volcano Observatory before authorizing activities in this unit (Redoubt Creek could be subject to catastrophic flooding if Mount Redoubt erupts).	Waterfowl, spring nesting, summer molting, and fall concentration area; trumpeter swan, fall staging/concentration areas; geese spring and fall concentrations. Moose, general distribution. General distribution of rainbow trout and Dolly Varden/Arctic char; coho salmon spawning, red salmon. Harriet Creek, Redoubt Creek, and the unnamed creek in the northern part of this unit are anadromous. Black and brown bears concentrate along Harriet Creek when salmon are running. Harbor seal haulout concentration area around the coast of Harriet Point. Private parcels along the coast are used for residences for set net sites and for commercial logging.
121B	Bear Lake Remote (includes Bear and Wadell lakes)	se	1,633	11H	Cabins on private parcels around the lakes resulting from state's Bear Lake Remote Sale / Unit may be conveyable to a municipality. If this unit is conveyed, ensure public access to adjacent Units 121A and D. These two lakes appear to be the only lakes large enough for floatplanes in the area. Consult with the Alaska Volcano Observatory before authorizing activities in this unit (Redoubt Creek could be subject to catastrophic flooding if Mount Redoubt erupts).	Lake values: Waterfowl, spring, nesting, and fall concentration area; trumpeter swan, general distribution of rainbow trout and Dolly Varden/Arctic char; coho salmon spawning, red salmon spawning. Upland values: moose, general distribution.



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Unit Number	Unit Name	Designations	Acres	Map Number	Resource or use for which unit is designated / Management intent	Other resources and uses
121D	Outlet and inlets for Bear and Wadell lakes	ha rp	31	11H	These two lakes are currently surrounded by parcels in private ownership resulting from the state's past Bear Lake Remote sale. Anadromous fish and high sportfishing use. / Manage to protect habitat and to ensure public access and use of outlets and inlets of these two lakes. Consult with the Alaska Volcano Observatory before authorizing activities in this unit (Redoubt Creek could be subject to catastrophic flooding if Mount Redoubt erupts).	
122	Upper Katchin Creek	gu	16,182	11H	No identified resource values that warrant a primary designation other than General Use. This unit is not directly on the upper flanks of a volcano but close enough to Mt. Redoubt that the unit is at risk from heavy volcanic ash falls during eruptions. The Drift River drainage is at risk of catastrophic, sudden, large-volume floods similar to those produced during the 1989-90 eruptions. Rust Slough and Cannery Creek could also be at risk. / Consult with the Alaska Volcano Observatory before authorizing activities in this unit.	Mostly steep undevelopable east-facing slopes. Waterfowl, spring nesting, summer molting, and fall concentration area; trumpeter swan, fall staging/concentration areas. Moose, general distribution. Freshwater fish, general distribution of rainbow trout and Dolly Varden/Arctic char; coho salmon. Brown and black bears concentrate along Katchin Creek when fish are running.
123A	Upper Harriet Creek	gu	17,731	11H	No identified resource values that warrant a primary designation other than General Use. This unit does not include the upper flanks of Mt. Redoubt but it's close enough to be at risk from heavy volcanic ash falls from eruptions. Also, Harriet Creek could be subject to catastrophic flooding if Mt. Redoubt erupts. / Consult with the Alaska Volcano Observatory before authorizing activities in this unit.	State selected. Mostly inaccessible. No overland access and no lakes large enough for floatplanes. Moose, general distribution; general distribution of rainbow trout and Dolly Varden/Arctic char.
124	South tip of Kalgin Island	gu	1,126	11H	No identified resource values that warrant a primary designation other than General Use. /	Mature spruce within this unit are all beetle killed.

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Unit Number	Unit Name	Designations	Acres	Map Number	Resource or use for which unit is designated / Management intent	Other resources and uses
125	Redoubt Bay Critical Habitat Area	ha	171,633	11F	Legislatively designated area. See the ADFG management plan for the Trading Bay State Game Refuge and Redoubt Bay CHA for additional resource information on this unit. / Consult with Alaska Volcano Observatory before authorizing activities in this unit. See the "DNR Management Authority in Critical Habitat Areas, Game Refuges, and Sanctuaries" guideline in the "Fish and Game Habitat and Harvest" section in Chapter 2 for management intent.	Rust Slough and the Drift River could be subject to catastrophic flooding if Mt. Redoubt erupts. Area also is at risk from heavy ash falls during eruptions. There are numerous existing authorizations in the CHA including pipeline easements and personal use cabins along the Kuskatan River. There are also documented trespass cabins in the CHA. The flow control structures that Cook Inlet Aquaculture Association installed at the outlet of Marten Lake in the Big River Lakes system were designed to assure sockeye salmon spawning escapement into these lakes. Beluga whale habitat on tidelands. Fossils on tidelands and cliffs around Redoubt Bay.
126A	West Foreland	ha	80	11F	Duck and goose concentration and harvest area in the spring and fall.	Mostly wetlands. Cultural sites present. Oil and gas potential.
126B	West Foreland	gu	424	11F	No identified resource values that warrant a primary designation other than General Use. / Consult with National Marine Fisheries Service (NMFS) before authorizing development in this unit because of harbor seal concentrations.	Tidelands values adjacent to parcel include: fall waterfowl concentration area along coast. Harbor seal general distribution along coast. Shore Fishery Leases along coast.
157A	Lower Drift River, Rust Slough and Little Jack Slough	ha	12,584	11G	This unit includes two large parcels. Rust Slough, Little Jack Slough, Round Lake Creek, Cannery Creek, and Drift River that are all anadromous streams. With the exception of Little Jack Slough and Round Lake Creek, these streams could be subject to catastrophic flooding if Mount Redoubt erupts. This unit is close enough to Mt. Redoubt that the unit is also at risk from heavy volcanic ash falls during eruptions. / Consult with Alaska Volcano Observatory before authorizing activities in this unit.	

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Unit Number	Unit Name	Designations	Acres	Map Number	Resource or use for which unit is designated / Management intent	Other resources and uses
157B	Cannery Creek and Rust Slough	gu	4,535	IIG	Rust Slough and Cannery Creek could be subject to catastrophic flooding if Mount Redoubt erupts. This unit is close enough to Mt. Redoubt that the unit is also at risk from heavy volcanic ash falls during eruptions. / Consult with Alaska Volcano Observatory before authorizing activities in this unit.	Rust Slough and Cannery Creek are anadromous streams.
158	Upper Cannery Creek	se	7,198	IIG	Cannery Creek homestead area is within this unit. Rust Slough, Cannery Creek, and the Drift River could be subject to catastrophic flooding as a result of an eruption. This unit is close enough to Mt. Redoubt that the unit is at risk from heavy volcanic ash falls during eruptions. / Consult with Alaska Volcano Observatory before authorizing activities in this unit. Low density settlement recommended taking into consideration salmon and bear habitat concerns along waterbodies.	Bears feed along Cannery Creek. Anadromous fish in Round Lake Creek and Cannery Creek. Moose, general distribution; ducks, geese, and trumpeter swan spring, nesting, fall, and molting concentration area; general distribution of rainbow trout and Dolly Varden/Arctic char throughout. High potential for cultural resources.
159	Upper Drift River and Big River	gu	41,861	IIG	No identified resource values that warrant a primary designation other than General Use.	Mostly steep, inaccessible lands wedged between state and federally designated areas. Limited recreational values because of remote location, difficult access. Black bear spring use; winter moose concentration habitat; trumpeter swan nesting and molting; and coho salmon habitat and harvest. Hunting for moose and bears. Likely that areas around the lakes contain cultural resource sites.

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Unit Number	Unit Name	Designations	Acres	Map Number	Resource or use for which unit is designated / Management intent	Other resources and uses
169	Kustatan Ridge	rh	10,973	<i>11E</i>	Well-drained ridge interspersed with scattered wetlands and small ponds surrounded by the Trading Bay State Game Refuge (SGR). The southern part of the unit borders the Redoubt Bay Critical Habitat Area (CHA). Roads and pipelines associated with the Trading Bay production facility and exploratory wells are located in the southern part of the unit. Roads also used to access Kustatan River for fishing. Portion of Trading Bay production facility airstrip in this unit. The borough has expressed interest in selecting this unit as an area for development and access route to the SGR, CHA, McArthur and Kustatan rivers, and other areas. / This unit may be conveyed to a municipality. Also see the "Specific Management Intent for Units" section for additional management intent for this unit.	Moose winter habitat in the northern part of the unit. In the southeast end of the unit there is duck, swan, and goose habitat.
170	West Foreland bordering Trading Bay Critical Habitat Area	ha	320	<i>11F</i>	Surrounded by Redoubt Bay Critical Habitat Area (CHA); moose, general distribution throughout. Brown bear, crucial spring feeding areas. Ducks and geese, spring, nesting, fall, and molting concentration areas; trumpeter swan, general distribution. Freshwater fish, general distribution of rainbow trout and Dolly Varden/Arctic char throughout.	Poor access because of surrounding wetlands and the lack of legal access across Native Corporation lands to the east. This unit is not recommended for addition to the CHA.

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Unit Number	Unit Name	Designations	Acres	Map Number	Resource or use for which unit is designated / Management intent	Other resources and uses
171A	Snout of Blockade Glacier and Upper McArthur River	ha	20,505	IIE	Borders Trading Bay State Game Refuge. High wildlife habitat value, including concentrated moose winter areas and post rutting habitat and black bear feeding areas. South-facing alder slopes are spring bear feeding habitat and denning area. Salmon are in the McArthur River and associated tributaries and lakes. Dolly Varden and rainbow trout are in non-glacier lakes and tributaries. Known winter moose concentration area, trumpeter swan nesting concentration area.	Parts of this unit were selected for mineral potential.
171B	Upper Kustatan and McArthur River drainages	gu	14,703	IIE	Two large parcels with no identified resource values that warrant a primary designation other than General Use.	
171C	Upper Black Sand Creek and Bachatna Creek	ha	12,985	IIE	Two large parcels. South-facing alder slopes along Black Sand and Bachatna creeks are spring bear feeding and denning areas. An unnamed tributary of the Kustatan River is a moose post-rut area.	
174	Upper North Fork of Big River	ha	1,276	IIE	This is an isolated parcel that is difficult to manage. / Recommended addition to the Redoubt Bay Critical Habitat Area.	

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176	Trading Bay State Game Refuge	ha hv	163,311	IID	Legislatively designated area. Recreation associated with fish and game harvest. Salmon and Dolly Varden and rainbow trout in the rivers. Significant duck, goose, and swan habitat particularly along the coast but also throughout the area. Black and brown bear concentrate along the entire length of the Kustatan River. Brown bear concentrate on the Upper Noukta Slough. The upper McArthur River in the refuge is also an intensive spring black bear use area. Tyonek residents harvest black bear, moose, marine mammals, salmon, freshwater fish, waterfowl, small game, and plants in the area. They also trap in the area. Sport fishing along Nikolai Creek and sport hunting for waterfowl and moose. Beluga whale habitat. See the ADFG management plan for the TBSGR and RBCHA for additional resource information on this unit. / See the "DNR Mgt. Authority in Critical Habitat Areas, Game Refuges, and Sanctuaries" guideline in the "F&G Habitat and Harvest" section in Chapter 2 for management intent.	In the past there has been timber harvest along Nikolai Creek.
177	Upper Chuitna River coal lease	co	40,557	IIA	Contains the Mine Shop, Center Ridge, and Lone Ridge coal deposits. Active coal leases with pending applications for roads, materials sites, a runway, and other facilities. / The unit will be retained in public ownership and managed primarily for coal development. The post-mining intent for this unit is to provide high-value habitat for moose overwintering and water quality for downstream fisheries. The streams must be buffered from mining activities. Also, the riparian area along the Chuitna River and Creek will be closed to grazing to avoid conflicts with brown bears that concentrate seasonally in this area.	Contains important moose overwintering habitat. Brown bears concentrate seasonally in this area. Pending DNR Division of Forestry application for an experimental forest. Potential timber values in lower elevations. Most of the sport fishing on the Chuitna (Chuit) River occurs downstream from (and outside) this unit.

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Unit Number	Unit Name	Designations	Acres	Map Number	Resource or use for which unit is designated / Management intent	Other resources and uses
178A	Beluga River, North	ha	40	I/A	The adjacent Beluga River supports all five species of salmon, Dolly Varden and rainbow trout. Accessible by boat and used for sport fishing and waterfowl and moose hunting.	
178B	Beluga River, West	gu	12	I/A	No identified resource values that warrant a primary designation other than General Use. Many developed lots are near this unit, and there is road access to this unit.	Gas wells are located south of this unit and the Beluga Road, connecting road and transmission line passes west of the unit. Unit may be entirely within the floodplain.
178C	Beluga River, East	ha	30	I/A	Beluga whales feed on lower river. The adjacent Beluga River supports all five species of salmon, Dolly Varden and rainbow trout. This section of the Beluga River also supports harbor seals in summer. Moose winter concentration and calving concentration. / Consult with National Marine Fisheries Service (NMFS) before authorizing development in this unit because of harbor seal concentrations. Recommended for addition to the Susitna Flats State Game Refuge.	
182	Susitna Flats State Game Refuge tidelands	ha hv	1,147	I/A	The 300,000 acre refuge was designated in 1976 by the legislature (AS 16.20.036) and ADFG completed a management plan for the area in 1988. See the ADFG management plan for more resource information on this area. / See the "DNR Management Authority in Critical Habitat Areas, Game Refuges, and Sanctuaries" guideline in the "Fish and Game Habitat and Harvest" section in Chapter 2 for management intent.	

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Unit Number	Unit Name	Designations	Acres	Map Number	Resource or use for which unit is designated / Management intent	Other resources and uses
302A	Nikolai Creek mouth	ha	67	IID	All wetlands. Concentrated winter moose habitat, pink, coho, and king salmon and Dolly Varden in Nikolai Creek. Sportfishing and subsistence fishing in creek. Mouth of the creek is a waterfowl hunting area for Tyonek residents and sport hunters. Harvest for black bear, moose, plants, small game, trapping. / ILMA to ADFG or recommended for inclusion in the Trading Bay State Game Refuge.	Borough selected (ADL 206353).
302B	Parcel west of Shirleyville	rh	600	IID	Several pipelines, trails and powerlines running east -west across this unit The southeast corner (23 acres) of this unit is in the clear zone of the airstrip that is immediately to the east on Mental Health Trust land. Tyonek residents and visitors use the area for hunting, fishing, and hunting. / This unit may be conveyed to a municipality.	Borough selected (ADL 206353). All wetlands.
303	Upper Nikolai and Stedatna creeks	fo	2,233	IID	Spruce forest / Mitigate timber harvest impacts on habitat values within Nikolai Creek bottomlands.	Rainbow trout, coho and king salmon in Nikolai Creek. Coho salmon in Stedatna Creek. Moose winter concentration area. Trumpeter swan nesting habitat along wetlands immediately adjacent to Nikolai Creek.
304	Single section along Lower Chakachana River	ha hv	640	IIE	Isolated piece of state land that's all wetlands and unvegetated gravel bars. Community resource harvest for salmon in the river. Salmon and Dolly Varden in River. Moose winter habitat. / Recommend ILMA to ADFG or legislative designation for addition to the State Game Refuge.	
306	Upper McArthur River drainage	gu	65,666	IIE	No identified resource values that warrant a primary designation other than General Use.	Mostly state selected. Coho, sockeye and chum salmon and Dolly Varden habitat in the McArthur River. Moose, rutting concentration area. Selected by state because of moderate potential for granite, tin, greisen, coal resources and building stone.



## Region 11: West Side of Cook Inlet--North of Redoubt Bay

Unit Number	Unit Name	Designations	Acres	Map Number	Resource or use for which unit is designated / Management intent	Other resources and uses
307	Higher elevations around Chakachatna River and Chakachamna Lake	gu	161,720	11C	Resource values are not high enough to warrant a primary designation other than General Use. / Due to hazards from volcano eruptions and flooding, development is discouraged on the flanks of Crater Peak and along the Chakachatna River between the Lake exit and the confluence with Straight Creek.	Difficult access. Habitat and recreation values are on only a small portion of the unit. Moose, rutting concentration area; freshwater fish, general distribution of rainbow trout and Dolly Varden/Arctic char, sockeye salmon. The mouth of the Chilligan River hosts moose, river otter, bald eagle, grizzly bear, and caribou. Many Dall sheep and caribou trails in the high country east of the river. The area encompassing the western end of Chakachamna Lake, the north shore of Kenibuna Lake, and the toe of the Shamrock Glacier (within Units 307 and 308) have potential for fly-in hut-to-hut system. Other parts of the lake shore may be suitable for kayak-accessible huts. Two townships immediately east of Lake Clark Wilderness and encompassing the western end of the lake have scenic values and potential for recreation and small-scale tourism.
307A	Mount Spurr	gu	98,527	11B	No identified resource values that warrant a primary designation other than General Use. / Due to hazards from volcano eruptions and flooding, development is discouraged on the flanks of Crater Peak and along the Chakachatna River between the lake exit and the confluence with Straight Creek. Consult with the Alaska Volcano Observatory before authorizing activities in this unit.	All state owned. Difficult access. Predominantly mountains and glaciers. Moose, rutting and winter concentration areas only in the eastern half of unit, general distribution throughout; general distribution of rainbow trout and Dolly Varden/Arctic char. Geothermal leasing has occurred in the past around Mt. Spurr.

## Region 11: West Side of Cook Inlet--North of Redoubt Bay

Unit Number	Unit Name	Designations	Acres	Map Number	Resource or use for which unit is designated / Management intent	Other resources and uses
308	Chakachatna River and Chakachamna Lake	rd	41,041	<i>IIC</i>	The area encompassing the western end of Chakachamna Lake, the north shore of Kenibuna Lake, and the toe of the Shamrock Glacier (within Units 307 and 308) have potential for fly-in hut-to-hut system. Other parts of the lake shore may be suitable for kayak-accessible huts. Two townships immediately east of Lake Clark Wilderness and encompassing the western end of the lake have scenic values and potential for recreation and small-scale tourism. The rapids of the upper river are navigable, although with difficulty by rafts and kayaks. Visitors kayak the lake and hike the drainages. Rock climbers trek up the glaciers on the south side of the lake to access big-wall climbing. Areas around the lake are hunted in fall and winter. Trails and camps around the lake for recreational use will require authorizations from BLM and DNR as long as the lake remains within a power site withdrawal. / Due to hazards from volcano eruptions and flooding, development is discouraged on the flanks of Crater Peak and along the Chakachatna River between the Lake exit and the confluence with Straight Creek. Consult with the Alaska Volcano Observatory before authorizing activities in this unit.	The lake and river are state owned and the uplands around these waterbodies are still state selected. Access from the lake to the higher elevations is difficult because of thick alders. Moose rutting concentration area. General distribution of rainbow trout and Dolly Varden/Arctic char. All five species of salmon use the Chakachatna River, including sockeye. Chakachamna Lake and Chilligan River are also anadromous. The Chilligan River Valley supports black bears, moose, river otter, bald eagle, grizzly bear, and caribou. Many Dall sheep and caribou trails in the high country east of the river.
505	Harriet Point, north tidelands	ha	3,372	<i>IIH</i>	Harbor seals concentrate along the coast. Anadromous stream mouths. Clamming beaches within one mile north and south of Harriet Point (redneck and razor clams). Important shorebird and dabbling duck habitat on tidelands north of Harriet Creek in this unit. / Consult with National Marine Fisheries Service (NMFS) before authorizing development in this unit because of harbor seal concentrations on tidelands.	Shore Fishery Leases.

### Region 11: West Side of Cook Inlet--North of Redoubt Bay

Unit Number	Unit Name	Designations	Acres	Map Number	Resource or use for which unit is designated / Management intent	Other resources and uses
513	Cottonwood Beach tidelands	ha	1,998	11A	Anadromous stream mouth. Historic beluga whale habitat; waterfowl harvest, high density spring and fall waterfowl staging area. The tidelands from the confluence of Threemile Creek north to unit 182 provide important overwintering habitat for rock sandpipers.	Shore Fishery Leases. Extensive tideflats extending from shore. Old gas well on adjacent uplands, Beluga Road, Beluga power plant and transmission line, Beluga landing strip. Periodic barge landings at high tide.
514	Region 11 General Use tidelands	gu	519,554	11D	No identified resource values that warrant a primary designation other than General Use.	Cultural sites present. The Drift River area of Redoubt Bay supports more than 400,000 shorebirds during spring migration. Shorebird migration area. Beluga whale winter habitat.
563	North Foreland tidelands / Tyonek Pier	wd	838	11D	The Tyonek Native Corporation holds a tidelands lease for the Tyonek pier. If the pier were extended, potential future use of pier for shipping coal.	
564	Tidelands off Viapan Lake area	gu	335	11A	No identified resource values that warrant a primary designation other than General Use.	Shore Fishery Leases. The Superior barge landing site is located in this unit. Potential site for a future log transfer site. Historic beluga whale habitat.
565	Chuitna River offshore submerged lands (Ladd Landing)	wd	3,583	11D	Ladd Landing is a barge landing site and a log transfer facility. Tidewater Services Corporation holds an option to lease borough-owned land for the development of a port for coal mining, but Granite Point is also a possible site for these port facilities.	Anadromous stream mouth. Historic beluga whale habitat. Cultural sites present.
566	Phillips Platform(s) tidelands	rh	610	5A	Phillips Petroleum operates two platforms in this unit: A Red Crane and A Gray Crane.	

### Region 11: West Side of Cook Inlet--North of Redoubt Bay

Unit Number	Unit Name	Designations	Acres	Map Number	Resource or use for which unit is designated / Management intent	Other resources and uses
567	Shirleyville and Granite Point tidelands	wd	5,730	11D	UNOCAL holds easements for dual pipelines to transport natural gas and crude oil on the tidelands. The Granite Point pump station and a residential settlement, Shirleyville, is located adjacent to the unit. Tidewater Services Corporation holds an option to lease borough-owned land at Granite Point for a port for shipping coal. Also a potential resource transfer site for timber products, materials, and oil and gas.	Port site has already undergone AMSA Coastal Consistency Finding and ADFG Title 16 authorization. There are existing Shore Fishery Leases in this area. Major drainages support anadromous fish. This unit contains rock sandpiper overwintering habitat. Cultural sites present.
568	Mouth Nikolai Creek tidelands	ha	177	11D	Anadromous stream mouth. There is sportfishing all along Nikolai Creek for pink, coho, and king salmon and Dolly Varden. The mouth of the creek is a waterfowl hunting area. This unit contains rock sandpiper overwintering habitat.	
569	Trading Bay tidelands with oil platforms	rh	28,019	11D	There are four oil rigs located in this unit: Monopad, King Salmon, Grayling 1A, and Steelhead. Beluga whale habitat.	
570	Kustatan Ridge access tidelands	rh	553	11F	Potential access point to Kustatan Ridge and adjacent lands. Public road access to the Unocal facility and the Kustatan River. / Accommodate additional shoreline facilities that will provide public and commercial access to adjacent uplands. Tidelands may be conveyed to a municipality.	
571	Trading Bay Production Facility tidelands	wd	377	11F	Unocal uses the tidelands for barge landing once or twice a year at high tide. Oil companies have commissioned a feasibility study for building a pipeline across Cook Inlet to transport crude oil. The pipeline would start at Trading Bay and would extend 40 miles to Tesoro's storage tanks at the Nikiski refinery.	Cultural sites present.

### Region 11: West Side of Cook Inlet--North of Redoubt Bay

Unit Number	Unit Name	Designations	Acres	Map Number	Resource or use for which unit is designated / Management intent	Other resources and uses
572	West Forelands tidelands	rh	1,168	11F	Potential recreation access shoreline because of its shoreline accessibility and deep water. The Salamatof Native Association is considering building a lodge by the lakes on West Forelands, which would require tideland access facilities. / Accommodate additional shoreline facilities that will provide public and commercial access to adjacent uplands.	
573	Drift River Terminal tidelands	wd	2,342	11H	The barge landing area for the Drift River Petroleum Terminal is located on the tidelands. Oil platforms are scattered offshore. The Drift River facilities also include a pipeline terminus, tanks, and airstrip.	Brown bears feeding on sedge-covered tideflats along the coastline south of Redoubt Bay. The Drift River area of Redoubt Bay supports more than 400,000 shorebirds during spring migration. Beluga whale habitat. Two anadromous stream mouths.
574	Cobbs Cove tidelands (Kalgin Island)	gu	426	11H	No identified resource values that warrant a primary designation other than General Use.	
575	Northwest Point tidelands (Kalgin Island)	gu	305	11H	No identified resource values that warrant a primary designation other than General Use.	Shore Fishery Leases.
576	Packer's Creek tidelands (Kalgin Island)	ha	79	11H	There are two hunting lodges upstream of this site on Packers Creek Lake. Packers Creek Lake and its tributary creeks support anadromous fish. Rainbow, Dolly Varden, coho, and sockeye salmon in the creek and at the creek mouth. / Siting a log transfer facility in the unit is compatible with the management intent for the unit if it can be located at least 300' from the mouth of Packers Creek.	Potential log transfer facility (LTF) site.